Montana Brucellosis Biosecurity Education and Risk Assessment

Montana State University Extension Service

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Executive Summary

Objectives

This proposal supports a comprehensive set of activities aimed at helping the Montana livestock industry recover and preserve its brucellosis Class Free status. Using the principles of Beef Quality Assurance (BQA) and current biosecurity efforts it will allow Montana livestock producers to assess their individual herd risk for brucellosis and launch biosecurity measures. This proposal is designed to protect cattle from brucellosis exposure and transmission emanating from the Greater Yellowstone Area (GYA) and the critical risk areas established by the Montana Department of Livestock.

Overall Methods

This proposal implements a "team" approach to provide educational programs so that beef cattle producers can assess their individual herd risk for brucellosis and to implement a ranch biosecurity program. Team members would include the state veterinarian from the Department of Livestock, local veterinarians, county extension agents, leadership from local beef producer groups and MSU faculty and staff.

Livestock BQA and biosecurity practices have been demonstrated as effective techniques to reduce livestock disease. On-going biosecurity projects in MT are examples of affordable and practical tools in livestock disease prevention. Biosecurity programs can be employed to reduce overall brucellosis exposure and reduce brucellosis disease transmission within cattle herds and between cattle herds and wildlife.

This program centers on risk assessments for brucellosis infection transmission in livestock. Assessments of diseases exposure risk and transmission risk are critical to the initiation of a brucellosis biosecurity plan. Once the risk is gauged, specific biosecurity practices can be developed appropriate to the level of assessed risk.

Provide technical assistance for implementing, maintaining and evaluating individual herd biosecurity plans. This will include subsidized whole herd testing for brucellosis.

Expected Outcomes

The reservoir of brucellosis in bison and elk populations surrounding the GYA poses a relatively new and unique barrier to the nation's long-sought efforts to eradicate brucellosis. Biosecurity measures based on novel epidemiological models that take into account that these distinctions are critical in both short- and long-term efforts to control this disease among livestock populations within and surrounding the GYA.

Critical to controlling brucellosis in this region is an information network that links livestock producers, practicing veterinarians, state and federal animal health authorities and state and local decision-makers. This program will feature a communications component providing both targeted technical information exchange and timely public information.

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Specific Objectives

1) To provide general BQA and biosecurity education to Montana livestock producers, veterinarians and other livestock and wildlife managers that incorporates the main tenants of biosecurity: 1) Improving immunity through vaccination; 2) Surveillance and testing for disease organisms and, 3) Attention to livestock movement, handling and management recordkeeping.

2) For all livestock producers in the GYA to complete and submit brucellosis risk assessment surveys to the appropriate animal health authorities and develop brucellosis biosecurity plans commensurate with the assessed levels of risk.

3) For a majority of livestock producers in the GYA to become Beef Quality Assurance certified and achieve BQA Biosecurity Proficiency Certification through training and examination.

4) To assist ranchers in testing their herds for brucellosis based on risk assessment. This will be done for two years in cooperation with the State Veterinarian and local veterinarians (Assistant State Vets)

5) To develop a cadre of producers and veterinarians within the GYA to achieve an advanced level of biosecurity knowledge and proficiency and act as community instructors in livestock biosecurity practices.

6) To develop economic and epidemiological models to assess risk of a breach in biosecurity and brucellosis risk.

Specific Methods

1) Offer a series of at least two (2) public informational meetings annually in each of the seven (7) GYA counties that outline the current status of Montana's Brucellosis Action Plan (BAP). Incorporate into these meetings educational information on general livestock disease control and livestock biosecurity specific to brucellosis. From these programs schedule brucellosis risk evaluation exercises for livestock producers who volunteer to complete a risk survey as established under the BAP.

2) Schedule small group settings ("table-top") exercises or individual consultations for livestock producers who want to develop overall herd biosecurity plans and/or brucellosis "Herd Plans" as outlined by the MDOL for the BAP.

3) Trained personnel will provide technical assistance to volunteer livestock producers in developing, implementing and evaluating their livestock biosecurity plans or brucellosis herd plans.

4) Assist in the coordination of whole herd testing, reimbursement to local veterinarians for time, effort and analysis of blood samples for brucellosis.

5) Selected biosecurity plans will be evaluated through a series of survey instruments as to their disease control effectiveness, cost effectiveness and on-ranch application practicalities.

Expected Outcomes and Time Table

1) By end of (CY 2009) application of brucellosis biosecurity plans will be developed for a majority of GYA livestock producers based on accepted epidemiological modeling and risk assessments. Rigorous and focused biosecurity planning in the GYA would continue through CY 2010 or until Montana's brucellosis Class Free status is achieved.
2) Normal state and national mass media outlets will be utilized through press releases and feature articles to assure the public not intimate with on-going brucellosis disease control efforts in the GYA. Every effort will be expended to credibly establish confidence in the brucellosis disease control efforts among in- and out-of-state animal health authorities.
3) By end of 2011 all previously implemented livestock biosecurity plans will have been reviewed and evaluated.
4) By end of 2011 epidemiological modeling for brucellosis in Montana will be completed as part of long-term planning and disease mitigation efforts for the GYA.

BIENNUM BUDGET REQUEST

1.0 FTE	Veterinarian with experience in livestock epidemiology with specific skills in disease modeling, statistical analyses and education	80,000
.5 FTE	Biosecurity resources team leader/program manager	$40,000
.5 FTE	Program Assistant- logistics & coordination	$25,000
Hourly	Clerical support and data collection	$10,000
	32% Benefit Rate	$48,400
Field Support	.20 FTE for 7 counties	$100,000
Total Personnel Expenses		**$303,400**
Operations, Travel & Communications		
	Contract modeling and economic analysis	$25,000
	Educational materials	$5,000
	Travel	$8,000
	Program expenses	$5,000
	Distance education services	$5,000
	Web page development and maintenance	$4,000
	Expendable office supplies	$5,000
	Postage and telephone	$8,000
	Printing and copies	$5,000
	Meetings	$5,000
	Incidental expenses	$5,000
	Communications	$1,600
Total Operations, Travel & Communications		**$81,600**
Herd Testing Reimbursement for Ranchers		
FY 2010	Ongoing Herd Testing/Adult Vaccination	$200,070
FY 2011	Ongoing Herd Testing/Adult Vaccination	$275,000
Total Herd Testing Reimbursement for Ranchers		**$475,070**
Total Biennial Request		**$860,070**